



Gylden Magick

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Feb. 2025

PRACTICAL MAGICK & UNIVERSAL ENERGY FOR EVERYDAY LIFE

Editor's notes

Dear readers of **GYLDEN MAGICK**,

Welcome to **GYLDEN MAGICK** – the spiritual magazine from Gylden Fellowship that spans both traditional and newer pagan beliefs and practice.

The **Gylden Community** is one of the most extensive pagan libraries in southern England. Its website, www.gyldenfellowship.co.uk, is growing too, with new books of folklore and poetry. We welcome new members constantly.

Our **Snow Moon** issue continues with a definite emphasis on Imbolg magick - the altar colours for this period are white, pink and rose. But no ads – after all, we're like a pagan public library and all the information is free.

At this special time of the year, we look forward to welcoming Brighid

back to the Hill of Uisneach and to our gatherings, to walk with us as we share her stories, her life and legacy. Be she druid, goddess, lover of nature and carer for all women, we hold her in our hearts for Imbolg in the time-honoured manner. Revere Brighid with candles, small fires and reed crosses.

Date for your diaries: 17 May 2025! **The Welsh Occult Conference 2025** is taking place at the beautiful and historic Gregynog Hall, Newtown SY16 3PL (mid Wales). Among the speakers are:

- Dr Stephen Skinner, on the grimoire tradition.
- Sue Ward, on William Lilly, his astrology and magic.
- Elaine Bailey, on Anna Kingsford of Golden Dawn.
- Geraldine Beskin, on Annie Horniman.

- Anne Pyatt, on the Order of the Cubic Stone.

Tickets available until the end of April at eventbrite.co.uk.

This issue of **GYLDEN MAGICK** includes peatland, pieces from Mark on science at school and dreaming, variscite gems, prehistoric footprints and demised (deleted) customs, a maritime curse, celestial forecasts and nature updates.

Anything else? Oh yes, the title – we never forget that our faith is based upon Nature and that our strength comes from earth magick. Many of our sabbats are based upon the light, e.g. solstices and equinoxes, as vital to us now as to our ancestors. For more info, why not join **Gylden Fellowship** on Facebook today?

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Ancient peoples: footprints

By Caroline Delbert

- Fossilised footprints in Saudi Arabia show evidence of human migration on the cusp of a subsequent ice age.
- Like carbon dating, scientists use isotopes and context clues to calculate the approximate age of fossils.
- These human prints were surrounded by animal prints, but not *hunted* animals, indicating humans were just thirsty.

A uniquely preserved prehistoric mudhole could hold the oldest-ever human footprints on the Arabian Peninsula. The seven footprints, found among a clutter of hundreds of prehistoric animal prints, are estimated to be 115,000 years old. Many fossils and artefacts have come from this special lake-bed in northern Saudi Arabia. Archaeologists uncovered the site, deep in the Nefud Desert at a location nicknamed "the trace" in Arabic, in 2017, after time and weather wiped the overlying sediment away. It's easy to imagine that a muddy lake-bed was a high-traffic area in the Arabian Peninsula over 100,000 years ago.

When populations migrate, such prints are left behind until they're covered over. In the far older Burgess Shale event, some of the oldest organisms ever found were preserved intact because they likely fell into a mudslide and were killed instantly. (The Burgess Shale event is a fossil deposit in Canada that records the end of the Cambrian Explosion, a period of rapid animal diversification that occurred 545 to 525 million years ago.) An armoured dinosaur was found in unprecedentedly good shape because it was encased in mud *and* in the cold of the ocean floor. Mud is a special method of preserving fossil remains:

"An experimental study of modern human footprints in mud flats found that fine details were lost within 2 days and prints were rendered unrecognisable within four and similar observations have been made for other non-hominin mammal tracks."

That means their special, tiny batch of preserved footprints were made in unique conditions that also form a kind of fingerprint for pinning them all to the same timeframe. From there, scientists started to look at *who* made the footprints. *Homo sapiens* weren't the only upright humanoid primate in the game, but the evidence, the scientists say, suggests we were the ones traipsing through the drying lakebed:

"Seven hominin footprints were confidently identified, and given the fossil and archaeological evidence for the spread of H. sapiens into the Levant and Arabia during [the era 130,000 to 80,000 years ago] and absence of Homo neanderthalensis from the Levant at that time, we argue that H. sapiens was responsible for the tracks at Alathar. In addition, the size of the Alathar footprints is more consistent with those of early H. sapiens than H. neanderthalensis."

The lake that forms Alathar today was likely part of a prehistoric highway that drew all the large animals in the area, forming a corridor dotted by freshwater rest areas that living things could travel on as they migrated with the weather or the changing climate. In this case, scientists found very little of the other factors that accompany prehistoric human travel, like knife or tool marks on animal bones indicating hunting.

"The lack of archaeological evidence suggests that the Alathar lake was only briefly visited by people. These findings indicate that transient lakeshore use by humans during a dry period of the last interglacial was likely primarily tied to the need for potable water."

Dreams

By Mark Sharpen

OK then, this piece describes what is actually going on in your brain when you go to sleep and start to dream. Some people believe that your brain is washing away a day's worth of toxic by-products in preparation for a new day of thinking ahead, but the processes behind this neurological cleansing system were never delineated in detail – this may be about to change.

Researchers from the University of Copenhagen have applied a suite of technologies to map the subtle rise and fall of neurotransmitters, blood volume and spinal fluid in mice during their daily lives. The findings are intended, not only to help understand better how the brain refreshes itself at night, but also to reveal any unexpected effects of common sleep drugs.

This cleansing process has been likened to the brain's sewage network, but the actual biological process lies within the **glymphatic system**. It is a newish feature, having only been discovered in mice over a decade ago. Since then, scientific investigations have mapped the network in human brains, revealing that the glymphatic system draws spinal fluid deep into the brain's interior to carry away any materials that risk causing damage in high concentrations. Some of these waste products are linked to cognitive disorders. This waste removal also helps balance water levels across the brain, facilitates the presentation of potentially dangerous agents of disease to the immune system and even helps deliver supplies of fuel to where it's needed most.

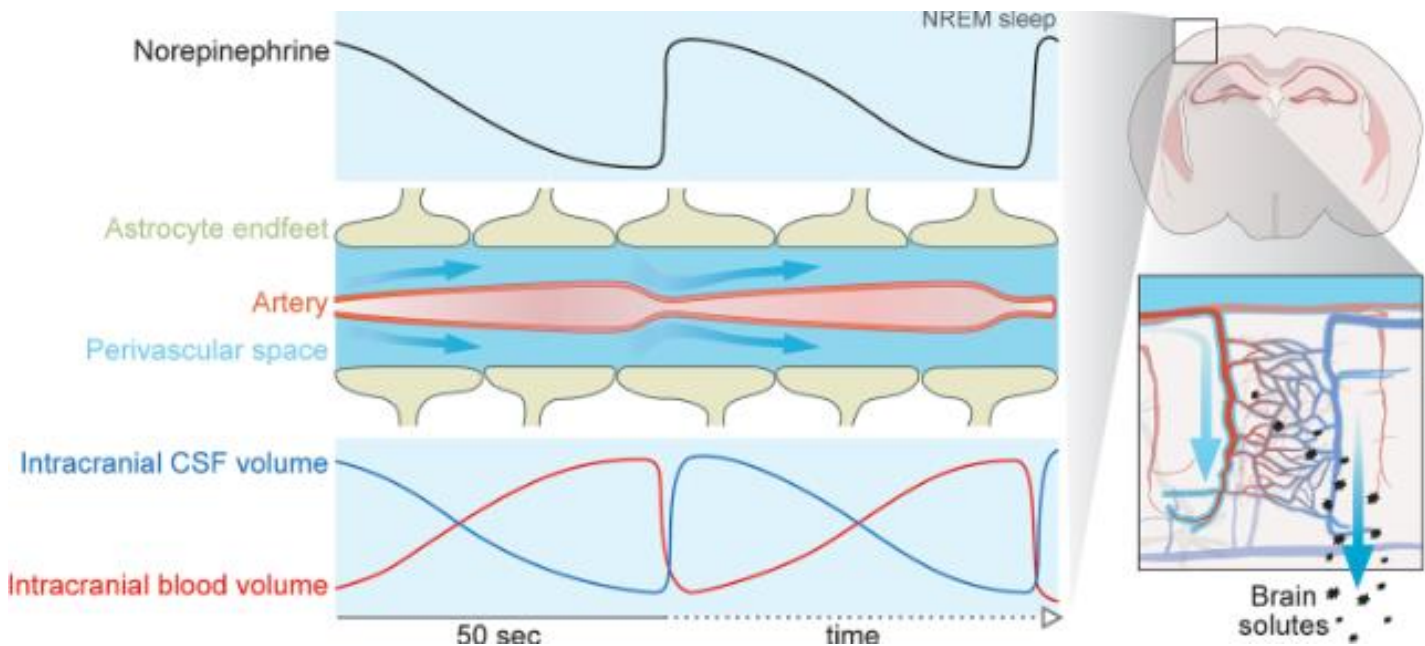


Research into how the brain ejects material into the waste removal system, to be rhythmically washed away for removal, suggest that brain wave patterns (orchestrated collectively by neurons) coordinate the process. One problem is that the research was carried out on animals under anaesthetic. So, how would a naturally-occurring sleep-wake cycle manage its glymphatic system?

According to **Maiken Nedergaard**, senior author and co-director of the University of Rochester's Centre for Translational Neuromedicine, *"The motivation for this research was to better understand what drives glymphatic flow during sleep, and the insights from this study have broad implications for understanding the components of restorative sleep"*.

To trace the brain-washing process back to its physiological roots, researchers developed a new method of fibre-optic implants, which allowed them to record the dynamics of fluids through the brains of mice as the animals ran relatively free about their cages. By tagging the neurotransmitter (norepinephrine) and using the fibre-optic implant to activate light-sensitive genes engineered into the animal's brain tissues, the team could monitor and experiment on fluctuations in waste removal while the mice were asleep and while they were awake.

The researchers' work supported previous studies, showing norepinephrine caused blood vessels to contract rhythmically over pulses lasting around 50 seconds, followed by a subtle oscillation in blood volume throughout the brain. This relationship between neurotransmitter fluctuations and changing blood volumes was far more pronounced while the mice were in a non-dreaming sleep state than awake or in a dream-phase.



(Hauglund, *Cell*, 2025)

Further, they demonstrated experimentally these pulsations did, in fact, drive the glymphatic system into penetrating further into the brain, affirming the role that deep sleep plays in clearing out the waste left by a day's hard thinking. According to the study's first author, neuroscientist **Natalie Hauglund**, "These findings, combined with what we know about the glymphatic system, paint the whole picture of the dynamics inside the brain, and these slow waves, micro-arousals, and the norepinephrine were the missing link".

The research team also discovered that certain pharmaceuticals can alter sleep phases. Although insomnia cures (such as Ambien or Zolpidem) are promoted as helping people to sleep, the research team tested what impact, if any, the drug had on the cleaning process. They found that such medication reduced the oscillations and impeded the ability for cerebrospinal fluid to work its way into the brain's depths.

Sleep medication still has a place, but its effect on the waste removal process in our brains is interesting, if alarming.

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Parinirvana: 15 February 2025

Collated by Gylden Fellowship







Celestial forecasts: February 2025

By Joanna Bristow-Watkins



February in Britain sees the steady increase of daylight hours leading us towards spring, but air temperature remains unpredictable with this often presenting as the coldest month of the year with reasonable chance of snow. Look out for snowdrops poking through the soil, together with the yellow, white and violet of crocuses (or croci, apparently both plural forms are acceptable). The subtle aroma of witch hazel blossoms may linger. and the pretty white flowers of the wood anemone, known as an indicator of ancient woodland (rather like bluebells come May), may also appear, but it's still early for them. Local ponds should be full of frogspawn, as well as similar gelatinous spawns laid by toads and newts.

*The month of February was named after the Roman God **Februa** (sometimes called **Februus**) and his annual Roman springtime festival of purification and cleanliness. To the Anglo-Saxons, February was called 'Sōlmōnath', derived from 'sōl' -an Old English word for wet sand or mud. However, according to medieval scholar Bede, it relates to the month when ritual offerings of loaves of bread and savoury cakes were typical to ensure a good year's harvest*

*February begins with the Pagan Festival of **Imbolc**; this month, we can look forward to the Japanese Celebration of **Setsuban** (3rd), the traditional Festival of **Valentine's Day** (14th) plus the Roman festivals of **Lupercalia** (15th) and **Caristia** (22nd).*

*We have Forest Bathing and Harmony Healing vouchers available as gifts. Our **Full Moon Meditation** takes place 7.30-9.30pm (UK time) on Wednesday 12th, with **Snow Full Moon** peaking at 13:53. We have our public **February Forest Bathing event** 11am-1.30pm on Sunday 16 February at Harry Edwards in Shere (Surrey). Katie will be leading it this month, because I will be at the site of WWII Stalag Luft III POW camp (now in Poland) for the 80th Anniversary of the Long March. I'll be addressing an assembly of RAF Officers about dad's Great Escape involvement and reading extracts from his diary after each evening of the commemorative walk; I expect it will be an emotional experience.*

Saturday 1 and Sunday 2 February are the Pagan Imbolc Ceremony, which is one of the four Great Celtic Festivals, and which is a Wiccan and Druid Festival of Fertility and Growing Light. Imbolc (pronounced EE-molk) is the old Celtic word; the celebration is also known as Candlemas (the latter is generally celebrated 2 February).



Imbolc is sacred to the Goddess Brigit, Brigid or Bridie, the power of the new moon, the Spring of the year, the flowing sea, corn dollies and the Great Moon Mother - Patroness of Poetry Making and Healing. Brigit is a triple Goddess, so she can be honoured in all her aspects; she is associated with fire, fertility, midwifery and the young.

The Imbolc Festival marks the passing of Winter and the first signs of Spring, with the emergence of new leaves and early flowers such as the snowdrop and crocus, as well as being the transition point of the threefold Goddess energies from those of the Crone to the Maiden. Imbolc is a Fire Festival and it is traditional, at sunset, to briefly light every light in the house. Or light candles in each room to celebrate the return of the sun. If it's been snowing, take time to enjoy walking in the snow, draw an image of the sun into the snow and reflect on the sun's warmth.

Traditional foods for Imbolc include anything dairy, including sour cream, as the festival celebrated the calving season. Spicy and rich foods, such as curry or anything made with peppers, leeks, onion, chives and/or garlic are appropriate to celebrate the sun, together with mulled wine and anything containing raisins which also represent the sun. It's also a good time to clear clutter and look at what you want to achieve this year and ask Brigit's help in making it happen.

Monday 3 February is Setsubun Bean-Throwing Festival, which is the day before the beginning of Spring in Japan. The name literally means "seasonal division", but usually the term refers to the Spring Setsubun, celebrated yearly on 3 February as part of the Spring Festival and accompanied by a special ritual to cleanse away all the evil of the former year and drive away disease-bringing evil spirits, naughty ogres or spirits called **Oni** for the year to come.

Why bean throwing? Families celebrate by scattering roasted soybeans outside the door of their house to chase out the oni (naughty ogres or spirits). They may also throw soybeans at a member of the family dressed as an Oni. If life is getting you all a bit, maybe chucking beans at each other is a good way to let off some steam! (The image by Antonia Skelton, for Harmony Healing, shows items placed on a house to keep bad spirits away.)



Wednesday 12 February @ 13:53 is the Snow Rowan Full Moon and it's a Micro Moon. When a Full Moon (or a New Moon) coincides with the point in the Moon's orbit most distant from Earth (apogee) it's called a Micro Moon.

Between Full Moon and the next New Moon (Saturday 13 March) is considered as a good time energetically for detoxing the body. Aligning ourselves with the moon cycle is very therapeutic, hence being aware of the New Moon (good for starting new projects) and Full Moon (a good time for bringing projects to a conclusion) is excellent for bringing harmony and wellbeing into our lives. Anyway, whatever the weather conditions, it's a fantastic excuse to get people of all ages outside in the fresh air and re-connecting with nature - something our modern lifestyles and obsession with technology can distract us from doing.

Wednesday 12 February, 7.30-9.30pm UK time (GMT) is our **Full Moon Unity Consciousness Meditation**. During this session, we connect with other like-minded people and together we work through a mindful chakra balancing process using colours and etheric crystals, with the aim that all participants will experience a degree of unity consciousness. Participants all receive a deeply healing experience. Cost to participate is £20 by online BACS payment (£1 admin fee added for PayPal, concessions to RSE/VFoA graduates), book at the **Harmony Shop**.

This activity serves as a good taster of Joanna's work in general and the virtual format of our Zoom based programme. And, most importantly, it's a step towards making a difference to the global predicament. To find out how working on your own spiritual consciousness can help humanity and the planet by raising the overall human consciousness levels, see Joanna's **You Tube explanation**.

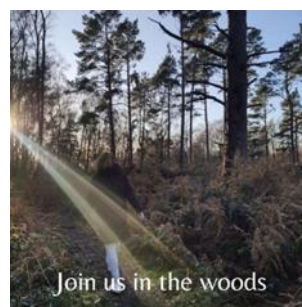
Or, to celebrate on your own, see **Angela McGerr's Full Moon Meditation with Gabriel**, taken from Angela McGerr's *Harmony of Angels* book; now out of print but signed copies are available from the **Harmony Shop**.

Thursday 14 February is Valentine's Day and is all about love and compassion, which includes Universal Love for all other living things and also Self-love which is so often overlooked. Some bitterly refer to it as Singles' Awareness Day and blame card manufacturers and our materialistic society for love being ritualistically forced upon us every year at this time.

However, although the story of Saint Valentine long precedes Hallmark et al; the origins are somewhat blurred as there are historical references to the existence of several different Valentines. Folklore indicates that Valentine was a priest during the third century in Rome. Emperor Claudius II outlawed marriage as he believed that single men made better soldiers than those with wives and families. Valentine, however, defied Claudius and continued to perform marriages in secret.

Claudius found out and Valentine was imprisoned, where one version of the legend indicates he befriended a jailer with a blind daughter and he may have somehow managed to restore her sight, resulting in the jailer converting to Christianity. Claudius ordered that Valentine be executed on 14 February and, allegedly, before his death sentence was carried out, he sent a note to the jailer's daughter and signed it, "From Your Valentine." Hence Valentine's Day is celebrated in his memory. However, his death day and his association with lovers and notes may have been convenient for Roman Christians looking for ways to blend existing Pagan/ Roman celebrations into their Calendar.

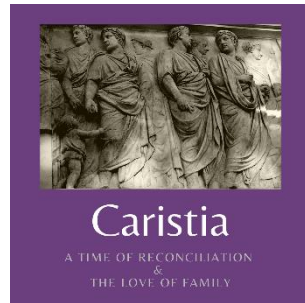
This year, let's take it as an opportunity for a little extra self-care and self-love, pausing to reflect on who we are grateful for. That doesn't have to be a romantic partner, there will be others that you love, or who love you, including mother earth (despite us being unruly children). Pause also to send love to those you think may be in need.



Friday 15 February is Lupercalia in Ancient Roman tradition. Apparently, this was the popular ceremony of fertility, featuring naked men running through the street! Roman images show men dressed as dogs (or possibly wolves, since Lupus meant Wolf) and goats, Cupid and other personifications of fertility. Hence, some say this ceremony was the precursor for Valentines' Day.

Sunday 16 February 11am - 1pm, Forest Bathing with Joanna at Harry Edwards Healing Sanctuary (Shere, near Guildford, Surrey). Cost is £37.77 (+ PayPal fee if not paid by BACS). This is a 2½-hour Winter Full Moon Forest Bathing session which will take place in all weathers except 30+mph winds or storms.

Join us on a mindful, sensory journey through the beautiful woodland at Harry Edwards Healing Sanctuary, deep in the Surrey Hills Area of Outstanding Natural Beauty. Forest Bathing+ is based on the Japanese art of Shinrin-Yoku and involves a slow exploration of nature through your senses. It is a deeply relaxing and rejuvenating experience, and which, despite the title forest bathing does not involve any swimming! Some scientifically proven benefits of spending time in woodland include reduced stress levels, stronger immune system response, and a stabilised cortisol cycle. Book via our [Harmony Healing shop](#). Email kateandjo@harmonyinnature.uk to go on our forest bathing mailing list.



Saturday 22 February is the Roman Festival of Caristia. This was a Feast Day occasion of family reunion, when Roman fathers would pay special attention to their families. It was a day of reconciliation, when disagreements were to be set aside, but the satirical poet, Ovid, apparently suggested this would be best achieved by excluding family members who caused trouble. Families gathered together to dine and offer food and incense to the Guardian Deities, collectively known as Lares.

Friday 28 February @ 00:44 (Thursday night/Friday morning) is Ash New Moon.

The **New Moon Abundance Ritual** should be carried out within 24 hours after the New Moon. It needs to be after the New Moon because the moon should be waxing (getting bigger again) to carry the manifestation energy. There are video instructions on my **Facebook Page** or **You Tube Page**.

It's a good day for creating a personal or corporate Vision Board for 2025. Harmony Healing provides a **Vision Board template** and this is featured in the current 2025 lunar cycle mentoring programme.

Our current New Year New Vision moon connection programme ends today, with an Equilibrium Attunement to energetically align participants with the Sun, Moon, planet Earth, the constellations, the current Zodiac of Pisces. The New Year New Moon New Vision Course ends Thursday 27 February with an **Equilibrium Attunement** (see **YouTube video 'What Exactly is an Attunement?'**), which is usually available as a stand-alone purchase for £55, but I have it on offer for £44 (50% concession to my students), go to **Harmony Shop** to reserve your place.

Aligning ourselves with the moon cycle is very therapeutic, hence being aware of the New Moon (good for starting new projects) and Full Moon (a good time for bringing projects to a conclusion) is excellent for bringing harmony and wellbeing into our lives.

Celestial Forecast is compiled by Joanna Bristow-Watkins of Harmony Healing, the original is published at Joanna's Monthly Celestial Forecasts. It is created using many sources but notably the Moonwise Calendar and Lia Leendertz's Almanac. Whilst considerable effort is made to ensure accuracy, this is not an exact science and sources are sometimes contradictory!

Traditions: Forty Shilling Day

By Erica Zann

So, here's the thing. The Editor said that if I was going to bang on about nostalgia and things that were, in my Shrooms pieces, would I be interested in taking a closer look at some local customs that aren't followed any more? I said yes, great and here's one that used to happen in the Dorking area.

Forty Shilling Day was a local custom in Wotton (Surrey) that commemorated the death of William Glanville. It was celebrated on the anniversary of Glanville's death, which was 2 February 1718. William Glanville the Younger had held the office of William III's treasury official.

In his will, Glanville left instructions to pay £2 to five local boys who could recite certain passages from the Bible at St John's Church, standing by his tomb. They had to place both hands on Glanville's tomb in the parish churchyard, then recite by heart the Lord's Prayer, the Apostles' Creed and the Ten Commandments. That might sound like enough especially in a largely illiterate population, but Glanville put even more requirements down. Next, they were to take up a bible and read aloud the 15th chapter of the First Epistle of the Corinthians and write out two verses of this chapter in legible hand.

Such a quaint tradition, you might say. However, many boys could not read and write at that time, especially the poor. Second, the Parish of Wotton is fairly small and to provide 5 under-sixteen year olds each year could have been difficult. William Glanville had foreseen the second impediment and stated that neighbouring parishes could provide their youths. What he didn't foresee was that his anniversary would fall upon one of the coldest months in the year!

Over the centuries, this tradition was maintained, even moving the celebration to the spring when the weather was bad. In fact, tents were put up around Glanville's tomb to protect the celebration from bad weather. This charity hand-out stopped in the 1990s, due to several factors: a mix of cold conditions, a general lack of biblical knowledge and the fact that 40/- just wasn't attractive when apportioned to five people (about 40p each).



Events



The poster features a large black cat with yellow eyes and a pentagram collar on the right. On the left, a circular illustration shows a witch in a red cape and purple hat holding a black cat in a graveyard under a full moon. The background is a textured gold with a subtle pattern. The title is in red gothic script, and the dates are in green and purple block letters. Pentagram symbols are in the top and bottom center borders.

Wandering Witches' Fayres

2025

COWPLAIN
Community
Centre
April 12th &
November 8th

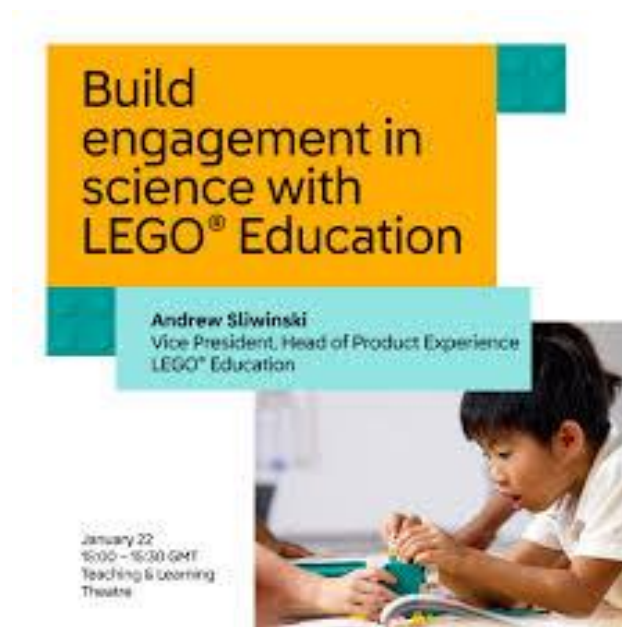
Learning about science

By Mark Sharpen

Well, well, well – LEGO has moved its latest product from the home to the school, courtesy of Lego Education Science. This product is a new science-based tool for teachers and students: the classic Lego bricks are used as the literal building blocks of hands-on science experiments and lessons. There are also guided lessons that explore dozens of scientific concepts.

Scheduled for release in the USA this summer, the kits are the latest product from Lego Education, a school-focused arm of the company that has been producing educational playsets for 45 years. Its kits are used in public schools across the country, including those in New York City's Department of Education, the Los Angeles Unified School District and Chicago Public Schools.

Lego Education Science is the company's first attempt at creating a standalone teaching tool. Sets of the past have been more supplemental to existing curricula - extra learning aides for after-school lessons or as part of science or robotics clubs. *"Not every kid gets to go to an after-school program or an enrichment club. For us, that started to feel like a very, very big opportunity to make even more impact and, certainly, to reach a much more diverse group of kids,"* says Andrew Sliwinski, Lego Education VP and head of product experience.



Lego Education's Science kits include more than 120 differentiated lessons across three grade ranges that can be explored using just the material in the box. Building with Lego is a central part of each lesson, but it's also a gateway for making sometimes difficult scientific concepts easier and more fun to understand. *"What we're trying to do is figure out a way where we can make science engaging, creative, and collaborative, but oh yeah, make that fit in a 45-minute lesson in a classroom with a teacher that doesn't have a background in science,"* says Sliwinski. *"It's quite the design brief to make that work."*

Each lesson involves building something with Lego pieces, then using what was built to explore a specific scientific concept or phenomenon, from momentum to structural stability. The kits are designed to be used in groups of four students, with an online component that teachers use to guide a lesson plan, which typically starts with a playful scenario or storyline and often features a familiar Lego figure.

Let's take an example – a lesson about earthquakes for students ranging from third through fifth grades, is called **Lemonade Shake**. It involves a Lego character with a lemonade stand. The students put the lemonade stand on a shake table and connect it to a small motor included in the kit. When the motor is turned on, the lemonade glasses tumbles to the ground. The students then attempt to design and build their own lemonade stand that could better withstand the seismic force of another earthquake.



Ruthie Chen Ousley is Lego Education's head of product for the science category and a former elementary school teacher. She says the familiarity of building with Lego helps students open up to scientific lessons that some might otherwise balk at, *"What we find is that it's really the combination of the different design choices that we've made that unlocks this level of engagement, from the storyline in the beginning that invites everybody in to think about this character and the immediate connection to the minifigure character that children have, to the array of Lego building elements and materials that they're able to play with"*.

Sliwinski says that developing Lego Education Science took more than five years. Lessons are aligned with the state and national standards used to normalise science curricula. In creating the tool, Lego Education integrated feedback from more than 150 teachers, and had hands-on testing by more than 3000 students, which proved invaluable in the design process. According to Sliwinski, *"You have to cater for a really wide range developmentally - what a five-year-old can do and what a 14-year-old can do are different, even down to physical hand and finger strength. So we had to think about all of those details"*.

The designers also had to contend with the reality that most kids already think of Lego as a toy. Sliwinski says it was important that the Lego Education Science kits weren't just perceived to be toys or seen as toys trying to hide the fact that they are schoolwork. Sliwinski says, *"What we really have to do is think about why should a kid be excited about this, why should a child think that this is interesting to them. The goal of the kits is to make science more approachable to young children and to see themselves when they hear the word scientist. That's not about just making science fun; that's about making science relevant more than anything else"*.

Folklore: The Great Eastern curse

By the Storyteller

Editor's note: this is a piece from the Storyteller's work, *Winter Chills - 2*. It was published on our website, during December.

The *Great Eastern*, launched in 1858, was huge. She defied the technology of the day – a vessel that pushed the envelope of what was scientifically possible in the mid-19th century was bound to be plagued by accidents and malfunctions. It is no wonder that persistent rumours surrounded the unlucky vessel, alleging that she was cursed or even haunted.

The ship was designed in 1854 by Isambard Kingdom Brunel, who envisioned a passenger and cargo vessel that could steam from England to Australia or India without stopping for fuel. This concept dictated her size as she would need to be huge in order to carry enough coal. It was nearly 700 feet in length, and weighed about 20,000 tons: about five times larger (by tonnage) than any ship afloat at the time. A larger ship would not be built until 1901, placing the *Great Eastern* about four decades ahead of its time. She had berths for 4000 passengers, a record never exceeded in an ocean liner. In order to move such a massive bulk, Brunel came up with an unprecedented design incorporating three different means of propulsion: side wheel paddles, a screw propeller and six masts of sails. The hull was entirely iron.

Six men were killed during the construction. Another two died during the first attempt to launch her. This fiasco caused a delay of several weeks between her christening and her eventual launch, something many seafaring men believed to be bad luck. After she was finally afloat, five men were killed during her sea trials when one of her boilers blew up. The accident caused an explosion of enough scalding steam to fill her elegant saloon, which might have killed many more, if not for the fortunate fact that virtually all the passengers were up on deck at the time. By this time, the strain of building, launching and testing the massive vessel had ruined Brunel's health. He suffered a stroke in 1859 and died on the same day he was told of the boiler accident.

When the time came for the *Great Eastern's* maiden voyage in 1860, her owners decided that voyages to the Far East would be too expensive for a ship of her size and, instead, committed her to carrying emigrants from England to New York. During her early voyages, crewmen and passengers were disturbed by a persistent pounding seemingly coming from inside the double layered hull, leading to apocryphal stories of a workman who had gone missing during construction and who was accidentally sealed up inside the hull.

His ghost, so the story went, pounded away on the hull, hoping someone would set him free. There is documentary evidence suggesting that even the captain of the *Great Eastern* was unsettled by the peculiar hammering. After the ship struck a rock off Long Island, New York, opening a gash far larger than the one that sunk the *Titanic*, it was discovered during the subsequent repairs that the banging was the result of a loose joint on one of the paddle wheels.

Eventually, her owners realised she was just too large to be profitable in the passenger business. She could not be filled and there were few ports large enough to accommodate her. She was refitted for laying telegraph cables and laid some of the first transatlantic telegraph lines. She was about the only ship afloat that could hold the necessary thousands of miles of cable for such tasks. Even in this role, she could not make a profit. Too far ahead of her time and too expensive to operate, she became a symbol of engineering folly and was laid up at Liverpool in 1874 waiting to be torn into scrap. This was finally accomplished in 1889. Unfounded rumours persisted that a skeleton was found inside her hull when she was torn apart.

Shrooms

By Erica Zann

Hi, welcome to more witterings from an elderly resident of a small English village. It's just Imbolg, but I'm already seeing Easter products in the shops, such as chocolate eggs, hot cross buns and so on. Ah well, everything is done at such a fast pace now that I lose track of which day is which.

Having said that, I did enjoy the live coverage of Up Helly Aa from Lerwick. This fire festival is held on the final Tuesday of January each year and has only been cancelled four times since the 1880s. Those occasions were for Queen Victoria's death, the First and Second World Wars and for covid. The programme is on BBC iPlayer.

Hasn't it been cold at night recently? In my experience, there's only one thing for really cold evenings – warm clothes, hot drinks or soup, a fan heater, the wireless and a hot water bottle for later. If there's nothing on the radio, a good magazine is fine and I have a copy of the *People's Friend* to read. Apparently, this one is the oldest women's magazine in Britain. The slippery pavements in the morning mean that I need a stick nowadays and boots with good grips. I try to donate a small something to various charities for the homeless too. When I have a moment, I try to make some basic remedies for my fellow residents. Examples are winter syrups for sore throats, oil of calendula for dry or chapped skin, oil of cleavers for psoriasis, spearmint teabags for upset stomachs and oil of comfrey for joint pains or pulled muscles.

Do you like traditional recipes? Some meals I can cook for myself from scratch, but my local supermarket now sells mushroom pies and cauliflower cheese pies; both are lovely, but the Editor says I'm not allowed to name the company, so I'll just mention that these are not ordinary pies!! Seeing as we're at Imbolg, home-made shepherds' pie or lamb chops are the order of the day – mind you, lamb chops are quite expensive for the amount of meat. I guess that I'll be using minced lamb for my shepherds' pie. I note that there's still some leftovers from Yule in the freezer, such as diced chicken, which means that I can use up the redcurrant jelly.

Valentine's Day approaches. I remember well the cards, flowers, gifts and dates from yesteryear with a degree of fondness and affection. I know that much of it now is an excuse for marketing, but there used to be a romantic day in the middle of the month and our community has a Valentine's Day tea. I do think that we lose or overlook the old ways at our peril. Many of our local shops have been experiencing shoplifters. In Ancient Persia, thieves had their hands chopped off!

It's been quite a time since someone asked me to make a love potion or cast a love spell for them, but I do create spells for peace regularly. Personally, I feel there's too much hatred and divisive opinions, which is why I don't vote any more, but try to slow down and spread my words of harmony everywhere.

Many blessings

Erica

Nature: Horsham update

By Sussex Wildlife Trust

Our Wilder Horsham project is a partnership project with Horsham District Council with the aim of restoring habitats in the district. Many good sites for wildlife are isolated, so one of the main aims of the project is to build wildlife bridges between these areas. We've been working with landowners in the area to create hedgerows, wildflower meadows, ponds, scrapes and leaky dams. Since the start of the project in 2020 we've:

- Planted 540 metres of hedgerow
- Built 82 leaky dams
- Created 31 ponds
- Planted 7373 trees
- Removed invasive species from 12 sites
- Engaged with 33 community groups.

You can find out more about the project and its successes so far in our short video or read our [summary of the year report](#). We're also thrilled to announce that the project has just secured another three years of funding!

The project has engaged all the major and a high percentage of the smaller environmental community groups (for a total of 33 groups) in Horsham District and continues to maintain relationships and support projects with these groups. Horsham District is fortunate to have a very active set of community groups working for wildlife and nature's recovery, and as a project we look to support each individual group in the way(s) that best support their needs. This has included site visits, project and site management advice, funding community projects through our Nature Recovery Award, giving talks on the project at events and sharing resources and key contacts.

One highlight has been the emergence of a strategy for building wildlife corridors across Horsham Town itself. This project initiated by the Horsham Green Spaces group and supported by the HDC Parks and Countryside team and Wilder Horsham District is called Wildways and has huge promise for building a Nature Recovery Network within Horsham Town itself.

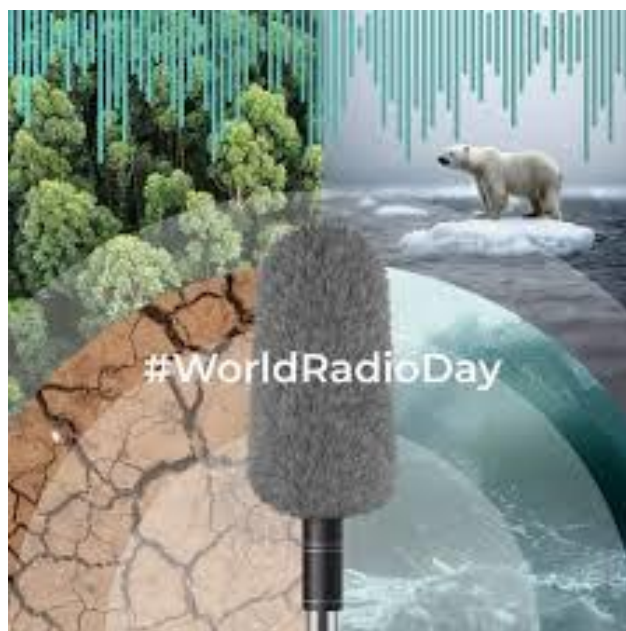
Another highlight has been engaging with the Storrington and Arun Valley Sussex Wildlife Trust Regional Group, which has led to many successes, including funding part two of their exciting project to install Swift boxes across Storrington and Sullington, Pulborough, Amberley and Billingshurst through the Nature Recovery Award, and developing a plan of action (with several others) to map and tackle key areas of the invasive Himalayan Balsam across the District.

The Sussex Wildlife Trust Communities and Wildlife team continue to contribute greatly appreciated time and resource towards supporting the project through landowner/ community group visits, communication materials and wildlife talks and walks.

World Radio Day: 13 February 2025

This is a UNESCO designated international observance to celebrate and cherish radios and community communications. In 2025, climate change is a major theme.

Collated by Gylden Fellowship







Peatland

By the World-Wide Fund for Nature UK

In the heart of the Yorkshire Dales, a beacon of nature recovery is emerging. We've partnered with Yorkshire Wildlife Trust, Natural England, the University of Leeds, the United Bank of Carbon, Woodland Trust and local communities to restore over 1500 hectares around Ingleborough.

The land around Ingleborough is big, open and breath-taking. The great limestone pavement looks more like the surface of the moon than the earth. It feels wild. Ingleborough is the second highest of Yorkshire's Three Peaks rising to 2371 feet. Topped by a cap of millstone grit, the geology of this peak is particularly interesting with its layers of limestones, shales, and sandstones. The great scar limestone forms the main mass of Ingleborough, under which, lies the Askrigg Block - land forced up along the South Craven fault. The surface limestone provides a good example of an upland limestone pavement.

There is also evidence of early human settlement of the area. Ingleborough hill fort is an iron-age settlement built by the Brigantes tribe. Historians believe that it was constructed around the 1st century to protect the tribe from the Romans. There are impressive views from the top of Ingleborough. On a clear day, visitors can see as far west to the Irish Sea and Morecambe. Closer to home, one can see across to Baugh and Howgill Fells, Blea Moor and Wensleydale.

The whole Ingleborough area is riddled with potholes and caves. Gaping Ghyll is one of Britain's largest caverns and the fall into the cavern is Britain's highest unbroken waterfall. The water flows under the earth to Ingleborough Cave and reappears in a well near Clapham. Gaping Ghyll is not open to the public, as it is not a developed cave. However, every year on the May and August bank holidays, there are winch meets, when everybody can be lowered down for a guided tour. The visitor sits in a kind of swing mounted at a steel cable. The winch meets are organised by the Bradford and Craven Pothole Clubs.

In reality, this landscape is not as wild as it should be. It should be a patchwork of woodland, heather moorland, lichen heathlands and blanket bog – but over the years its rich diversity has been lost. The WWF wants to create a wilder future for Ingleborough. We want to bring back ancient woodland, hear skylarks sing over limestone grasslands and witness spectacular displays of wildflowers. So far. We have achieved the following work.

- Around 8500 trees planted
- 62 hectares of peat bog protected
- 304 hectares of land under restoration
- 5480 hours of volunteer work.

Our partnership is supporting low intensity farming, restoring wildlife-friendly habitats, and sharing skills and knowledge, so we can help make Ingleborough a haven for nature and people. By working together, we can use this project as an example of how we can restore nature and tackle the climate crisis. This work is only possible with the wisdom and support of local people. We'll be working with landowners, farmers and communities to share knowledge and support a thriving local economy. Local knowledge is helping us create new ways for communities and visitors to get involved, learn more about Ingleborough and discover why its natural recovery is so important.



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Wild Ingleborough will show what's possible when we restore a large area of UK uplands. In some areas, vegetation will regenerate naturally. In others, we'll connect areas of woodland by planting trees in the area. We'll also restore areas of blanket bog – an ancient habitat which is important for storing carbon, as well as being home for many wading birds.

We are restoring the home of the red squirrels, skylarks, butterflies and all the other wildlife that lives there. We'll also be protecting against flooding, improving the water and soil quality and enabling more carbon to be absorbed by the land.

We are only at the beginning. This project will run for many years, acting as an example of community-centred nature restoration, for others to follow in the UK and around the world.

Through planting trees and restoring woodland we are helping to keep carbon in the ground and out of the atmosphere. However, the real star of the show is blanket bog – one of the UK's most powerful carbon stores. This habitat could unlock the secret to reducing our carbon emissions. Unfortunately, most of the UK's blanket bog has been damaged or degraded, causing harmful carbon to be released into the atmosphere. This makes what we're doing at Ingleborough so vital in tackling the climate crisis. By protecting and restoring one of our rarest, most precious habitats, we can put nature at the heart of climate action.



Gemmology: Variscite

By Andrew Middleton et al

An archaeological investigation was undertaken by Pre-Construct Archaeology on land at Grange Farm, Gillingham, Kent, during October 2005-May 2006. The site was positioned upon the northern slope of a hill, over-looking the River Medway and was continuously exploited from the Late Iron Age until post-Mediaeval times. Roman occupation of the site seems to have occurred soon after the conquest of Britain. In a tomb, constructed in 200-300 CE alongside a road, necklace chain fragments were discovered on top of a collapsed tessellated surface. The tomb contained a teenage girl and two gold necklaces were found overlying the grave, but no further goods were found with the skeleton.

The two necklaces may have been placed as funerary offerings or be grave goods from another tomb. In other reports, there are several parallels for the necklaces from continental Europe. One parallel is provided by a child's grave from Bonn, another is a more elaborate necklace from Pouilly-sur-Saône and parallels for the terminals on the fragment of a necklace can be found on items from Archar, Bulgaria and from a third-century tomb in Lyon. The two items from Gillingham were declared under the terms of the **Treasure Act 1996** (this act has now been amended by the Treasure Act 2023). and the original purpose of our investigation was to conduct analyses to form the basis of a report to the Coroner. It quickly became apparent however that these finds were of particular interest and, with the agreement of the excavators, a more detailed investigation of the materials used was undertaken. Several techniques were used including optical microscopy, X-ray fluorescence analysis, Raman spectroscopy and X-ray diffraction.

Analysis of the stone beads from one of two gold necklaces found in the Romano-British grave near Gillingham, using non-invasive Raman microscopy, showed that the beads are of garnet and emerald. The second gold necklace is set with seven green beads. These are very similar in appearance to weathered green glass, but X-ray fluorescence analysis suggested that the beads are composed essentially of aluminium phosphate, leading to the interpretation that they may be **variscite**; this was confirmed by X-ray diffraction analysis. Variscite is a stone in the eponymous variscite mineral group. It's **a hydrated aluminum phosphate with a fairly low ranking on the Mohs mineral hardness scale of 3.5-4.5**. Sometimes, chalcedony impurities can make variscite stones harder. The stone is almost always opaque.



Variscite has been reported only rarely from Romano-British contexts, but polished beads and pendants of variscite (often referred to as *callais* or *callainite*) have been reported relatively frequently from Neolithic sites in Brittany and elsewhere in NW Europe. Visual identification of variscite is not straightforward and the ease with which it may be confused with weathered green glass (a material that is relatively common from Roman contexts) suggests that perhaps the striking difference in abundance between Neolithic and Roman contexts is apparent rather than real. The study emphasises the need for analytical investigation of finds of weathered green glass from Roman contexts, beyond visual examination.

The analysis was carried out via a Bruker Artax micro-XRF spectrometer with a molybdenum tube (operated at 50 kV, 0.8 mA). The areas to be analysed were not prepared in any way; the analyses may be subject to error due to the effects of surface enrichment of the gold alloy during burial. The long chain was found to contain 85%-88% gold with 7%-10% silver and 2%-4% copper. The shorter chain contained 90%-93% gold, 3%-6% silver and 1%-3% copper.

Identification of the gemstones was via Raman spectroscopy. This too was non-invasive and non-destructive and was carried out on unprepared surfaces of the red and green stones. A Dilor LabRam Infinity Raman microscope equipped with two lasers (a green Nd:YAG laser at 532 nm and a near infrared diode laser at 785 nm) was used. Spectra were compared with a British Museum in-house database of standards. Analyses of the red stones on necklace KKGf 03(205) sf234 showed that these are all garnets, probably close in composition to the magnesium-rich garnet, pyrope. Analysis of the bright green stones on the longer necklace fragment showed these to be emeralds. However, it was not possible to obtain useful spectra from the rather dull green stones of the shorter necklace fragment, probably because of surface alteration/contamination during burial.

Examination of these dull green stones using a binocular microscope revealed that they have pitted surfaces, with small cavities containing minute globular (botryoidal) aggregates. The colour of the beads varies both from one bead to another and also within a single bead. Upon these microscopical observations, it was thought that the beads might be of weathered green glass. However, the results of XRF analysis did not support this interpretation. Several beads were analysed using the Artax spectrometer: for these analyses and helium gas was used to flush the analysis area in order to improve detection of light elements. The spectra obtained indicated that the proportion of silicon was very low, not consistent with the beads being made from glass.



Instead, the XRF analyses indicated that the beads contained high proportions of aluminium and phosphorus, together with small amounts of potassium, titanium, chromium and vanadium. Consideration of this rather unexpected composition suggested that the beads might be variscite. A very small sample was removed from one of the beads for analysis using a Debye-Scherrer X-ray powder diffraction (XRD) camera. Comparing the resulting diffraction pattern with the ICDD database (International Centre for Diffraction Data, Pattern 25-18) confirmed the identification of the material of the bead as variscite.

As already mentioned, variscite is a member of a group of minerals that includes several arsenates and phosphates with a general chemical formula $AXO_4 \cdot 2H_2O$, where A can be aluminium (Al^{3+}), iron (Fe^{3+}), chromium (Cr^{3+}) or indium (In^{3+}), and X may be arsenic (As) or phosphorus (P). The most commonly occurring minerals of this group are strengite ($FePO_4 \cdot 2H_2O$) and variscite ($AlPO_4 \cdot 2H_2O$); there is a compositional series between the two end-member compositions with varying proportions of iron and aluminium. It is possible to distinguish between the various minerals of the variscite group on the basis of their Raman spectra

Necklaces and bracelets of Roman date, comprising gold chains set with emeralds and garnets are relatively well known throughout the Roman Empire, including Britain. Emeralds, in particular, were highly regarded by the Romans and Pliny wrote in his *Natural History* "... no colour has a more pleasing appearance. ... there is nothing whatsoever that is more intensely green. ... engravers of gemstones find that this is the most agreeable means of refreshing their eyes: so soothing to their feeling of fatigue is the mellow green colour of the stone".

Sources of emeralds are few and it is thought that emeralds used in the Roman world were obtained from the Eastern Desert of Egypt, but it was also common for green glass to be used as a substitute for emerald and also other coloured glasses to imitate amethyst, sapphire and pearl. The published examples of the use of variscite in Roman jewellery from Britain is very low.

Other reported finds include the recovery of a small bead, identified as variscite, from excavations at the General Accident Head Office Extension site in York and a second variscite bead from York that was found at the Rougier Street site; this faceted cuboid bead was dated to the mid-fourth century or later. Another reported find was, a fragment of a stone finger ring from excavations at Gadebridge Park, Hemel Hempstead; this was identified as variscite, following a combination of qualitative spectrographic analysis, which showed that the ring consisted mainly of aluminium and phosphorus, and XRD, which produced a diffraction pattern that could be matched with variscite. In the analytical report, it was noted that variscite is a rather rare mineral and that "*this is the first time it has been identified [in Britain] in an archaeological artefact*". However, other variscite British artefacts include a record of three beads with octagonal cross-sections that were recovered amongst the small finds from Balcerne Lane, Colchester.



For some time, pale to bright green beads and pendants have been reported from many prehistoric or Neolithic sites in western Europe, especially in Brittany. These beads are often described as being of callais or callainite, but now are usually referred to as variscite. These terms (callais and callaina) were used by Pliny, but it is thought that he was referring to turquoise, hydrated copper aluminium phosphate, rather than to variscite. Later chemical analyses of some callais beads from a tomb at Mané-er-Hroek, Locmariaquer showed that they consisted of a hydrated aluminium phosphate. Also, analyses of some Breton beads showed that they contained hydrated aluminium phosphate, similar to variscite.

Rose petals

By Nicola Ison

It's that time of year again — not long until the feast of the Christian saint Valentine — and a time when the shops are full of cards, flowers and other presents for one's beloved. Love potions have always been a stock-in-trade product for witches, both fictional and community practitioners, and also for poets.

I sip my rose petal tea and let my mind drift,
On a calming wave of serenity.
The memories flood back from earlier in the year,
When all was confusion and darkness.
Panic and bewilderment fought a constant battle,
With loneliness, pain and despair.
And then, like a colourful springtime flower,
Help arrived in the form of kindness and concern.
I remember sunny meetings in a country churchyard,
As companions, we talked and gazed upon peace –
Lambs in the field, scented plants and diet coke.
All around us, the headstones showed another peace,
But you, my friend, stopped me from joining them,
Far too early, now I reflect with my tea.
And, perhaps, I should share this with you alone –
It needs repeating, because you don't really believe.
Your spirit is so kind and you have an inner beauty,
That shines out like a radiance for all to see.
As I gaze idly on autumnal colours in the garden,
I feel I should have had a photo or two of that,
Peaceful country churchyard and of you too.
But my memories are clear and comfort me,
When the dark times appear now and then.
Occasionally, I say online that I'm thinking of you,
Sending blessings or healing for you, but really,
It's a peaceful country churchyard that has a place,
In my soul and, always, you join me there too.

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